stance than for the iodide of potassium in a similar state of solution.

713. I then experimented on bodies rendered decomposable by fusion, and first on *chloride of lead.* The current was excited by dilute sulphuric acid without any nitric acid between zinc and platina plates, fig. 47, and was then made to traverse a little chloride of lead fused upon glass at *a,* a paper moistened in solution of iodide of potassium at *b,* and a galvanometer at g. The metallic terminations at *a* and *b* were of platina. Being thus arranged, the decomposition at *b* and the deflection at *g* showed that an electric current was passing, but there was no appearance of decomposition at *a,* not even after a *metallic* communication at *b* was established. The experiment was repeated several times,, and I am led to conclude that in this case the current has not intensity sufficient to cause the decomposition of the chloride of lead; and further, that, like water (709), fused chloride of lead can conduct an electric current having an intensity below that required to effect decomposition.

714. *Chloride of silver* was then placed at a, fig. 47, instead of chloride of lead. There was a very ready decomposition of the solution of iodide of potassium at *b,* and when metallic contact was made there,, very considerable deflection of the galvanometer needle at g. Platina also appeared to be dissolved at the anode of the fused chloride at a, and there was every appearance of a decomposition having been effected there.

715. A further proof of decomposition was obtained in the following manner. The platina wires in the fused chloride at *a* were brought very near together (metallic contact having been established at *b),* and left so; the deflection at the galvanometer indicated the passage of a current, feeble in its force, but constant. After a minute or two, however, the needle would suddenly be violently affected, and indicate a current as strong as if metallic contact had taken place at *a.* This I actually found to be the case, for the silver reduced by the action of the current crystallised in long delicate spiculse, and these at last completed the metallic communication; and at the same time that they transmitted a more powerful current than the fused

chloride, they proved that electro-chemical decomposition of that chloride had been going on. Hence it appears that the current excited by dilute sulphuric acid between zinc and platina has an intensity above that required to electrolyse the fused chloride of silver when placed between platina electrodes,